

**UNITED STATES DEPARTMENT OF ENERGY
SOUTHWESTERN POWER ADMINISTRATION**

**RATE SCHEDULE NFTS-98D¹
WHOLESALE RATES FOR NON-FEDERAL
TRANSMISSION/INTERCONNECTION FACILITIES SERVICE**

Effective:

During the period, April 1, 2001, through September 30, 2001, in accordance with the Secretary of Energy's interim approval.

Available:

In the region where Southwestern Power Administration (Southwestern) owns and operates high-voltage transmission lines and related facilities, and/or has contractual rights to such transmission facilities owned by others (System of Southwestern).

Applicable:

To Customers which have executed Service Agreements with Southwestern for the transmission of non-Federal power and energy over the System of Southwestern or for its use for interconnections. Southwestern will provide services over those portions of the System of Southwestern in which the Administrator, Southwestern, in his or her sole judgment, has determined that uncommitted transmission and transformation capacities in the System of Southwestern are and will be available in excess of the capacities required to market Federal power and energy pursuant to Section 5 of the Flood Control Act of 1944 (58 Stat. 887,890; 16 U.S.C. 825s).

Character and Conditions of Service:

Service will be provided as 3-phase, alternating current, at approximately 60 Hertz, and at the voltage level of the point(s) specified by Service Agreement or Transmission Service Transaction.

Definitions of Terms:

"*Customer*" is the entity which is utilizing and/or purchasing services from Southwestern pursuant to this rate schedule.

A "*Service Agreement*" is a contract executed between a Customer and Southwestern for the transmission of non-Federal power and energy over the System of Southwestern or for interconnections. Service Agreements include:

"Long-Term Firm Transmission Agreements" that provide for reserved transmission capacity on a firm basis, for a particular point-to-point delivery path, for a period of one year or more.

¹**Supersedes Rate Schedule NFTS-98C**

"Enabling Transmission Agreements" that provide for the Customer to request a variety of arrangements for periods of less than one year, which may be on a firm or non-firm basis.

"Network Transmission Service Agreements" that provide for the Customer to request firm transmission service for the delivery of capacity and energy from the Customer's network resources to the Customer's network load, for a period of one year or more.

"Interconnection Agreements" that provide for the use of the System of Southwestern and recognize the exchange of mutual benefits for such use or provide for application of a charge for Interconnection Facilities Service.

A *"Service Request"* is made under an Enabling Transmission Agreement through Southwestern's Open Access Same-Time Information System (OASIS) for reservation of transmission capacity over a particular point-to-point delivery path for a particular period. When a Service Request is approved by Southwestern, it becomes a *"Transmission Service Transaction."* The Customer must submit hourly schedules for actual service in addition to the Service Request.

"Firm Point-to-Point Transmission Service" is transmission service reserved on a firm basis between specific points of receipt and delivery pursuant to either a Long-Term Firm Transmission Agreement or to a Transmission Service Transaction. *"Non-Firm Point-to-Point Transmission Service"* is transmission service reserved pursuant to a Transmission Service Transaction and which is subject to curtailment or interruption. *"Network Integration Transmission Service"* is transmission service provided under Part III of Southwestern's Open Access Transmission Service Tariff which provides the Customer with firm transmission service for the delivery of capacity and energy from the Customer's resources to the Customer's load.

"Secondary Transmission Service" is associated with Firm Point-to-Point Transmission Service and Network Integration Transmission Service. For Firm Point-to-Point Transmission Service, it consists of transmission service provided on an as-available, non-firm basis, scheduled within the limits of a particular capacity reservation for transmission service, and scheduled from points of receipt, or to points of delivery, other than those designated in a Long-Term Firm Transmission Agreement or a Transmission Service Transaction for Firm Point-to-Point Transmission Service. For Network Integration Transmission Service, Secondary Transmission Service consists of transmission service provided on an as-available, non-firm basis, from resources other than the Network Resources designated in a Network Transmission Service Agreement, to meet the Customer's Network Load. The charges for Secondary Transmission Service, other than Real Power Losses and Ancillary Services, are included in the applicable capacity charges for Firm Point-to-Point Transmission Service and Network Integration Transmission Service.

The "*Demand Period*" used to determine maximum integrated rates of delivery for the purposes of power accounting is the 60-minute period which begins with the change of hour. The term "*Peak Demand*" means the highest rate of delivery, in kilowatts, for any Demand Period during a particular month, at any particular point of delivery or interconnection.

For the purposes of this rate schedule, the term "*Point of Delivery*" is used to mean either a single physical point to which electric power and energy are delivered from the System of Southwestern, or a specified set of delivery points which together form a single, electrically integrated load. Peak Demand for such set of points is computed as the coincidental highest rate of delivery among the specified points rather than as the sum of peak demands for each individual physical point.

"*Ancillary Services*" are those services necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the System of Southwestern in accordance with good utility practice. Ancillary Services include:

"Scheduling, System Control, and Dispatch Service" is provided by Southwestern as Control Area operator and is in regard to interchange and load-match scheduling and related system control and dispatch functions.

"Reactive Supply and Voltage Control from Generation Sources Service" is provided at transmission facilities in the System of Southwestern to produce or absorb reactive power and to maintain transmission voltages within specific limits.

"Regulation and Frequency Response Service" is the continuous balancing of generation and interchange resources accomplished by raising or lowering the output of on-line generation as necessary to follow the moment-by-moment changes in load and to maintain frequency within a Control Area.

"Spinning Operating Reserve Service" maintains generating units on-line, but loaded at less than maximum output, which may be used to service load immediately when disturbance conditions are experienced due to a sudden loss of generation or load.

"Supplemental Operating Reserve Service" provides an additional amount of operating reserve sufficient to reduce Area Control Error to zero within 10 minutes following loss of generating capacity which would result from the most severe single contingency.

"Energy Imbalance Service" corrects for differences over a period of time between schedules and actual hourly deliveries of energy to a load.

"Interconnection Facilities Service" provides for the use of the System of Southwestern to deliver energy and/or provide system support at an interconnection.

Rates for Firm Point-to-Point Transmission Service:

CAPACITY CHARGES FOR FIRM TRANSMISSION SERVICE:

Monthly:	\$0.69 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a longer term agreement
Weekly:	\$0.173 per kilowatt of transmission capacity reserved in increments of one week of service
Daily:	\$0.0314 per kilowatt of transmission capacity reserved in increments of one day of service

Service Associated with Capacity Charges for Firm Point-to-Point Transmission Service:

The capacity charge for firm transmission service includes Secondary Transmission Service, but does not include charges for Ancillary Services or for Real Power Losses associated with actual schedules.

Application of Capacity Charges for Firm Point-to-Point Transmission Service:

Capacity charges for firm transmission service are applied to quantities reserved by contract under a Long-Term Firm Transmission Agreement or in accordance with a Transmission Service Transaction.

Customers whose loads are directly connected to Southwestern's system and are not within Southwestern's control area will be charged on the greatest of (1) the Peak Demand at any particular point of delivery during a particular month, rounded up to the nearest whole megawatt, or (2) the highest Peak Demand recorded at such point of delivery during any of the previous 11 months, rounded up to the nearest whole megawatt, or (3) the capacity reserved by contract; which amount shall be considered such Customer's reserved capacity. Secondary Transmission Service for such Customers shall be limited during any month to the most recent Peak Demand on which a particular Customer is billed or to the capacity reserved by contract, whichever is greater.

Rates for Non-Firm Point-to-Point Transmission Service:

CAPACITY CHARGES FOR NON-FIRM TRANSMISSION SERVICE:

Monthly:	\$0.55 per kilowatt of transmission capacity reserved in increments of one month of service
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Weekly:	\$0.138 per kilowatt of transmission capacity reserved in increments of one week of service
Daily:	\$0.0251 per kilowatt of transmission capacity reserved in increments of one day of service
Hourly:	\$0.00157 per kilowatthour of transmission capacity reserved in increments of one hour of service

Application of Charges for Non-Firm Point-to-Point Transmission Service:

Capacity charges for Non-Firm Transmission Service are applied to quantities reserved under a Transmission Service Transaction, and do not include charges for Ancillary Services or Real Power Losses.

Rates for Network Integration Transmission Service:

ANNUAL REVENUE REQUIREMENT FOR NETWORK INTEGRATION SERVICE

\$4,922,300

MONTHLY REVENUE REQUIREMENT FOR NETWORK INTEGRATION SERVICE

\$410,192

NET CAPACITY AVAILABLE FOR NETWORK INTEGRATION SERVICE

573,300 kilowatts

CAPACITY CHARGE FOR NETWORK INTEGRATION TRANSMISSION SERVICE:

\$0.72 per kilowatt of Network Load (\$410,192/573,300 kilowatts)

Application of Charge for Network Integration Transmission Service:

Network Integration Transmission Service is available only for deliveries of non-Federal power and energy, and is applied to the Customer utilizing such service exclusive of any deliveries of Federal power and energy. The capacity on which charges for any particular Customer utilizing this service is determined in accordance with Southwestern's Open Access Transmission Service Tariff and the Network Transmission Service Agreement. Network Integration Transmission Service includes Secondary Transmission Service, but does not include charges for Ancillary Services or for Real Power Losses.

Rates for Real Power Losses

The Customer shall purchase real power losses unless it elects to self-provide such losses under the provisions detailed below in *Annual Election to Self-Provide Real Power Losses*.

Real Power Losses are computed as four (4) percent of the total amount of non-Federal energy transmitted on behalf of a Customer. The monthly charge for such Real Power Losses will be computed on a per kilowatthour basis as follows:

$$MC = .04 \times NFE \times R$$

with the factors defined as follows:

MC = The monthly charge (\$) by Southwestern for Real Power Losses of non-Federal energy transmitted on behalf of a Customer;

NFE = The amount of non-Federal energy (kWh) transmitted on behalf of a Customer during a particular month; and

R = The rate for Real Power Losses (\$ per kWh), is an average of Southwestern's actual costs for the purchase of energy to replace Real Power Losses during the previous fiscal year (October through September), as reflected in Southwestern's financial records.

The rate for Real Power Losses will be posted on Southwestern's OASIS by November 1 of each year. This rate will become effective for one year beginning January 1 of each calendar year.

Annual Election to Self-Provide Real Power Losses: The Customer may elect, on an annual basis, to self-provide all loss energy for which it is responsible, subject to the following conditions:

- (1) Such election for self-provision shall be for a full calendar year (January through December) for that Customer and shall be exercised by execution of a Service Agreement, or equivalent, before December 1 of the prior calendar year.
- (2) Unless otherwise specified in the Service Agreement, the Customer shall schedule the delivery of real power losses in the System of Southwestern at the rate of one megawatt of real power losses for every 25 megawatts of non-Federal power and energy delivered to Customers' loads served from the points of delivery set forth in the Southwestern/Customer contract.
- (3) For any new Customer taking transmission service from Southwestern, election to self-provide real power losses shall be made at the time the contract is negotiated. Such service shall be implemented as provided for in the contract and the election to self-provide shall apply through the end of that calendar year for all transmission services.

Monthly Capacity Charges for Transformation Service:

A charge of \$0.25 per kilowatt will be assessed for capacity used to deliver energy at any point of delivery at which Southwestern provides transformation for deliveries at voltages of 69 kilovolts or less from higher voltage facilities.

Application of Capacity Charges for Transformation Service:

For any particular month, charges for transformation service will be assessed on the greater of (1) that month's actual Peak Demand, or (2) the highest Peak Demand recorded during the previous 11 months. For the purpose of this rate schedule, the Peak Demand will be based on all deliveries, of both Federal and non-Federal energy, from the System of Southwestern, at such point during such month.

Rates for Ancillary Services:

CAPACITY CHARGES FOR ANCILLARY SERVICES ASSOCIATED WITH TRANSMISSION SERVICES:

(a) Scheduling, System Control, and Dispatch Service:

Monthly:	\$0.03 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Agreement or Network Transmission Service Agreement
Weekly:	\$0.008 per kilowatt of transmission capacity reserved in increments of one week of service
Daily:	\$0.0014 per kilowatt of transmission capacity reserved in increments of one day of service
Hourly:	\$0.00009 per kilowatthour of energy delivered as non-firm transmission service

(b) Reactive Supply and Voltage Control from Generation Sources Service:

Monthly:	\$0.03 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Agreement or Network Transmission Service Agreement
Weekly:	\$0.008 per kilowatt of transmission capacity reserved in increments of one week of service
Daily:	\$0.0014 per kilowatt of transmission capacity reserved in increments of one day of service
Hourly:	\$0.00009 per kilowatthour of energy delivered as non-firm transmission service

(c) Regulation and Frequency Response Service:

Monthly:	\$0.04 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Agreement or Network Transmission Service Agreement
Weekly:	\$0.010 per kilowatt of transmission capacity reserved in increments of one week of service

Daily: \$0.0018 per kilowatt of transmission capacity reserved in increments of one day of service

Hourly: \$0.00011 per kilowatthour of energy delivered as non-firm transmission service

(d) Spinning Operating Reserve Service:

Monthly: \$0.0073 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Agreement or Network Transmission Service Agreement

Weekly: \$0.00183 per kilowatt of transmission capacity reserved in increments of one week of service

Daily: \$0.00033 per kilowatt of transmission capacity reserved in increments of one day of service

Hourly: \$0.00002 per kilowatthour of energy delivered as non-firm transmission service

(e) Supplemental Operating Reserve Service:

Monthly: \$0.0073 per kilowatt of transmission capacity reserved in increments of one month of service or invoiced in accordance with a Long-Term Firm Transmission Agreement or Network Transmission Service Agreement

Weekly: \$0.00183 per kilowatt of transmission capacity reserved in increments of one week of service

Daily: \$0.00033 per kilowatt of transmission capacity reserved in increments of one day of service

Hourly: \$0.00002 per kilowatthour of energy delivered as non-firm transmission service

(f) Energy Imbalance Service:

\$0.0 per kilowatt for all periods of reservation

Availability of Ancillary Services:

Ancillary Services (a) and (b) are available for all transmission services in and from the System of Southwestern and shall be provided by Southwestern. Ancillary Services (c) and (f) listed above are available only for deliveries of power and energy serving load within Southwestern's Control Area and shall be provided by Southwestern, unless, subject to Southwestern's approval, they are provided by others. Ancillary Services (d) and (e) are

available only for deliveries of power and energy generated by resources located within Southwestern's Control Area and shall be provided by Southwestern, unless, subject to Southwestern's approval, they are provided by others.

Application of Ancillary Services Charges:

Charges for all Ancillary Services are applied to the reserved or network transmission service taken by the Customer in accordance with the rates listed above when such services are provided by Southwestern.

The charges for Ancillary Services are considered to include Ancillary Services for any Secondary Transmission Service, except in cases where Ancillary Services (c) through (f) are applicable to a Secondary Transmission Service transaction, but are not applicable to the firm capacity reservation under which Secondary Transmission Service is provided. When charges for Ancillary Services are applicable to Secondary Transmission Service, the charge for the Ancillary Service shall be the hourly rate applied to all energy transmitted utilizing the Secondary Transmission Service.

Provision of Ancillary Services by Others:

Customers for which Ancillary Services (c) through (f) are made available as specified above must inform Southwestern by written notice of the Ancillary Services which they do not intend to take and purchase from Southwestern, and their election to provide all or part of such Ancillary Services from their own resources or a third party.

Subject to Southwestern's approval of the ability of such resources or third parties to meet Southwestern's technical requirements for provision of such Ancillary Services, the customer may change the Ancillary Services which it takes from Southwestern and/or from other sources at the beginning of any month upon the greater of 60 days' written notice or upon the completion of any necessary equipment modifications necessary to accommodate such change. Such notice requirements also apply to requests for Southwestern to provide Ancillary Services when such services are available as specified above.

Limitations on Energy Imbalance Service:

Energy Imbalance Service is authorized for use only within a bandwidth of ± 1.5 percent of the actual requirements of the load at a particular point of delivery, for any hour, compared to the resources scheduled to meet such load during such hour. Deviations which are greater than ± 1.5 percent, but which are less than $\pm 2,000$ kilowatts, are considered to be within the authorized bandwidth. Deviations outside the authorized bandwidth are subject to a Capacity Overrun Penalty.

Energy delivered or received within the authorized bandwidth for this service is accounted for as an inadvertent flow and will be netted against flows in the future. The inadvertent flow in any given hour will only be offset with the flows in the corresponding hour of a day in the same category. The two categories of days are weekdays and weekend days/holidays. This process will result in a separate inadvertent accumulation for each hour

of the two categories of days. The hourly accumulations in the current month will be added to the hourly inadvertent balances from the previous month, resulting in a month-end balance for each hour.

The Customer is required to adjust the scheduling of resources in such a way as to reduce the accumulation towards zero. It is recognized that the inadvertent hourly flows can be both negative and positive, and that offsetting flows should deter a significant accumulation of inadvertent. In the event any hourly month-end balance exceeds 12 MWHs, the excess will be subject to the Application of Capacity Oerrun Penalty or the Unauthorized Use of Energy Imbalance Service by Overscheduling of Resources provisions, depending on the direction of the accumulation.

Application of Capacity Oerrun Penalty:

Customers which receive deliveries within Southwestern's Control Area are obligated to provide resources sufficient to meet their loads. Such obligation is not related to the amount of transmission capacity that such Customers may have reserved for transmission service to a particular load. Customers whose resources are scheduled by Southwestern are not subject to this provision. In the event that a Customer under schedules its resources to meet its load, resulting in a difference between resources and actual metered load (adjusted for transformer losses as applicable) outside the authorized bandwidth for Energy Imbalance Service for any hour, then such Customer is subject to the following penalty:

CAPACITY OVERRUN PENALTY

For each hour during which energy flows outside the authorized bandwidth, the Customer will be obliged to purchase such energy at the following rates:

Months Associated with Charge	Rate per Kilowatt
March, April, May, October, November, December	\$0.10
January, February, June, July, August, September	\$0.30

Unauthorized Use of Energy Imbalance Service by Overscheduling of Resources:

In the event that a Customer schedules greater resources than are needed to meet its load, such that energy flows at rates beyond the authorized bandwidth for the use of Energy Imbalance Service, Southwestern retains such energy at no cost to Southwestern and with no obligation to return such energy. Customers whose resources are scheduled by Southwestern are not subject to this provision.

Application of Charge for Interconnection Facilities Service:

Any Customer that requests an interconnection from Southwestern which, in Southwestern's sole judgment and at its sole option, does not provide commensurate benefits or compensation to Southwestern for the use of its facilities shall be assessed a capacity charge for Interconnection Facilities Service. For any month, charges for Interconnection Facilities Service shall be assessed on the greater of (1) that month's actual Peak Demand, or (2) the highest Peak Demand recorded during the previous eleven months, as metered at the interconnection. The use of Interconnection Facilities Service will be subject to power factor provisions as specified in this rate schedule.

Rate for Interconnection Facilities Service:

The monthly capacity charge for Interconnection Facilities Service is \$0.69 per kilowatt.

Requirements Related to Power Factor:

Any Customer served from facilities owned by or available by contract to Southwestern will be required to maintain a power factor of not less than 95 percent and will be subject to the following provisions.

Determination of Power Factor:

The power factor will be determined for all Demand Periods and shall be calculated under the formula:

$$PF = kWh \div \sqrt{(kWh^2 + rkVAh^2)} ,$$

with the factors defined as follows:

PF = the power factor for any Demand Period of the month.

kWh = the total quantity of energy which is delivered during such Demand Period to the point of delivery or interconnection.

rkVAh = the total quantity of reactive kilovolt-ampere-hours (kvars) delivered during such Demand Period to the point of delivery or interconnection.

Power Factor Penalty and Assessment:

The Customer shall be assessed a penalty for all Demand Periods of a month where the power factor is less than 95 percent lagging. For any Demand Period during a particular month such penalty shall be in accordance with the following formula:

$$C = D \times (.95-LPF) \times \$0.10$$

with the factors defined as follows:

- C = The charge in dollars to be assessed for any particular Demand Period of such month that the Determination of Power Factor "PF" is calculated to be less than 95 percent lagging.
- D = The Customer's demand in kilowatts at the point of delivery for such Demand Period in which a low power factor was calculated.
- LPF= The lagging power factor, if any, determined by the formula "PF" for such Demand Period.

If C is negative, then C = zero (0).

Application of Power Factor Penalty:

The total Power Factor Penalty for any month shall be the sum of all charges "C" for all Demand Periods of such month. No penalty is assessed for leading power factor. Southwestern, in its sole judgment and at its sole option, may determine whether power factor calculations should be applied to a single physical point of delivery or to multiple physical points of delivery where a Customer has a single, electrically integrated load served through multiple points or interconnections. The general criteria for such decision shall be that, given the configuration of the Customer's and Southwestern's systems, Southwestern will determine, in its sole judgment and at its sole option, whether the power factor calculation more accurately assesses the detrimental impact on Southwestern's system when the above formula is calculated for a single physical point of delivery or for a combination of physical points or for an interconnection as specified by an Interconnection Agreement.

Southwestern, at its sole option, may reduce or waive power factor penalties when, in Southwestern's sole judgment, low power factor conditions were not detrimental to the System of Southwestern due to particular loading and voltage conditions at the time the power factor dropped below 95 percent lagging, or during the period April 1 through September 30, 2001, to provide time to assess the impacts of such power factor penalty.